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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/623,514	03/29/2001	Jitao Zou	43922	8673

24247 7590 07/01/2004

TRASK BRITT
P.O. BOX 2550
SALT LAKE CITY, UT 84110

EXAMINER

BAUM, STUART F

ART UNIT	PAPER NUMBER
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1638

DATE MAILED: 07/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/623,514

Applicant(s)

ZOU ET AL.

Examiner

Stuart F. Baum

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31, 34 and 35 is/are pending in the application.
- 4a) Of the above claim(s) 5, 7 and 22 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2, 4, 8, 9 and 24-31 is/are allowed.
- 6) ☒ Claim(s) 1, 3, 6, 10-21, 23, 34 and 35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 October 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The amendment filed 4/15/2004 has been entered.

Claims 1-31 and 34-35 are pending.

Claims 5, 7, and 22 are withdrawn from consideration for being drawn to non-elected inventions.

Claims 32-33 have been canceled.

2. Claims 1-4, 6, 8-21, 23-31 and 34-35 are examined in the present office action.

Claim Rejections - 35 USC § 102

(c) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 3, 6, 10-21, 23, 34-35 are rejected under 35 U.S.C. 102(e) as being anticipated by Lassner et al (June, 1998, U.S. Patent 6,444,876 B1).

The claims are drawn to an isolated nucleic acid molecule encoding a polypeptide having diacylglycerol acyltransferase activity, wherein the isolated nucleic acid molecule comprises a sequence encoding the polypeptide of SEQ ID NO:2, a vector comprising said nucleic acid molecule in sense orientation, a plant and plant seed comprising said nucleic acid molecule, wherein said seed exhibits an altered seed oil content, altered diacylglycerol content, seed oil with altered fatty acyl composition, or an enhanced biomass compared to a seed without the introduced nucleotide sequence, a method of producing a transgenic plant comprising introducing said nucleic acid molecule into a plant, or wherein said plant is a rapeseed or *Glycine* plant, or a method of changing the oil content, acyl composition or diacylglycerol/triacylglycerol

ration of the seed oil of plant seeds comprising introducing said nucleic acid molecule into a plant.

Lassner et al teach a nucleic acid molecule of SEQ ID NO:1 encoding polypeptide having diacylglycerol acyltransferase activity and encodes Applicants' polypeptide of SEQ ID NO:2 (see also attached sequence search result), a method of modifying the lipid composition in a plant cell comprising transforming a plant cell with a DNA construct comprising a DNA sequence in sense orientation encoding the polypeptide of SEQ ID NO:2, wherein the synthesis of triglycerides is increased, wherein said plant cell is a seed cell, or wherein the plant cell is a Brassica or soybean plant cell (Columns 66-68, Claims 1-10, 13-16, 20-32). Because the DNA molecule of Lassner encodes a protein with 100% sequence identity to Applicants' SEQ ID NO:2, and because the method steps of Lassner et al and Applicants are the same, it would be an inherent property of the DNA molecule of Lassner et al to alter seed oil content, diacylglycerol content, fatty acyl composition, or enhance biomass of a seed or plant when transformed and expressed in a plant or plant seed, and as such, Lassner et al anticipate the claimed invention.

4. Claims 2, 4, 8-9 and 24-31 are deemed free of the prior art, given the failure of the prior art to teach or reasonably suggest an isolated nucleic acid molecule encoding a polypeptide having diacylglycerol acyltransferase activity, wherein the isolated nucleic acid molecule comprises a sequence according to SEQ ID NO:1 or SEQ ID NO:3, a vector comprising said nucleic acid molecule, the plasmid pDGATcDNA or pDGATgene having accession number ATCC PTA989 or ATCC PTA988, a plant or plant seed, a method of producing a transgenic plant comprising said nucleic acid molecule and a method of changing the oil content, acyl

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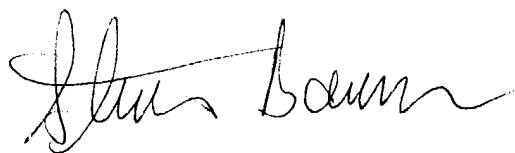
composition or diacylglycerol/triacylglycerol ration of the seed oil of plant seeds comprising transforming a plant with said nucleic acid molecule.

5. Claims 2, 4, 8-9, and 24-31 are allowed.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stuart F. Baum whose telephone number is 571-272-0792. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson can be reached on 571-272-0804. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-1600.

A handwritten signature in black ink, appearing to read "Stuart F. Baum". The signature is fluid and cursive, with the first name "Stuart" and last name "Baum" clearly distinguishable.

Stuart F. Baum Ph.D.
Patent Examiner
Art Unit 1638
June 21, 2004